

Cecilia, Bob and Jeff-

Attached is the July draft deliberative data analysis for the Bridgeton Landfill. In it, we also included an analysis of the data available for August from the new TPMs installed in the North Cell. The highlights are below, and in the attached analysis in bold.

### **North Quarry:**

- July 2014 measurements indicate that 7 of the 24 GEWs (30%) in the North Quarry exhibited increasing temperatures. This warrants further investigation.
- The landfill operator continues to apply limited vacuum pressure to collect waste gas at wells in the North Quarry. Limiting the amount of collected gas also limits the ability to detect a subsurface heating event (SSE), if one were to occur.
- Wells showing the highest balance gas concentrations were generally located in the northern and central portion of the North Quarry, and included the northern-most row of GEWs (GEW-02, GEW-03, GEW-04 and GEW-05) closest to OU-1. High balance gas concentrations here continue to warrant further examination, because they are not indicative of normal waste decomposition.
- Three new TPMs (TMP-16, TMP-17, and TMP-18) were installed in the North Quarry at the beginning of August. We analyzed the first 2 weeks of information from these TPMs. The data available do not illustrate strong trends, owing to the short time period they have been operating (8/18/2014 – 9/2/2014). However, areas of highest temperature appear to be in the 60-100 ft deep range. The maximum observed temperature was 166 °F. The new TMP data provide much-needed information regarding subsurface conditions in the North Quarry. Until now, information on subsurface conditions in the North Quarry has been limited due to reduced vacuum pressure applied to GEWs. The closest GEW to the new TPMs, GEW-53R, has mostly had gas temperatures exceeding 131 °F and has had a fairly stable temperature of approximately 140 °F since April 2014.

### **Neck Area:**

- Six of 13 GIWs monitored in the Neck Area exhibit temperature increases.
- Strong temperature trends are difficult to assess in the GEWs here because little to no vacuum, or a highly fluctuating vacuum pressure is being applied.
- Overall temperature trends are also difficult to assess in the Neck because 9 of 14 TMP clusters reported temperatures for less than half of their reading depths. Three out of the 14 TMP clusters have completely failed (TMP-7R, TMP-11 and TMP-13), and no temperature data are available where these TMPs are located.
- Strong temperature trends are difficult to assess in the Neck Area because the vacuum being applied to the GEWs is insufficient to determine what is occurring in the waste mass.
- Gas quality information in the Neck Area is not normal – it is not indicative of anaerobic decomposition conditions that would be expected in a municipal landfill.

#### **South Quarry:**

- Two of the 48 GEWs had temperatures greater than 200 °F : GEW-21A, GEW-76R. In June, there were 3 GEWs greater than 200 °F.
- 29 of 48 GEWs had temperatures greater than 140 °F in July 2014. In June, there were 32 GEWs greater than 140 °F.
- In July 2014, one of the GEWs in the South Quarry had effluent gasses consistent with normal municipal landfill waste decomposition.
- The areas with the greatest settlement continue to be located in the southern-central portion of the South Quarry (2-3 ft per month).
- The majority of the South Quarry continues to show monthly settlement between 0 and 2 ft.
- No appreciable changes in settlement rates were observed in the area immediately south of the neck.

The August analyses is forthcoming. I hope this information is helpful. Please feel free to contact me with questions or comments.

Thank you,

John

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